

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings of claims, in the application.

### **Listing of Claims**

Claim 1 (currently amended): A method for the determination of a disease state in a human subject, said method comprising the steps of:

- (a) measuring at least one optical property at a first area ~~on a part of an arm~~ on a body part of said human subject to obtain a first set of data, said first area being subjected to a first temperature program;
- (b) measuring at least one optical property at a second area on said ~~part of said arm~~ body part to obtain a second set of data, said second area being subjected to a second temperature program, said second temperature program being different from the first temperature program, said second area of said ~~part of said arm~~ body part being morphologically similar to, adjacent to, but not substantially overlapping with said first area of said ~~part of said arm~~ body part;
- (c) inserting said first set of data and said second set of data into a mathematical relationship to calculate a mathematical output; and
- (d) comparing said mathematical output to a category selector to determine said disease state of said human subject, wherein said disease state is selected from the group consisting of diabetic state, dermal disease state, neoplastic disease state, and vascular disease state.

Claim 2 (original): The method of claim 1, wherein said optical properties are measured with light having a wavelength ranging from about 400 nm to about 2000 nm.

Claim 3 (original): The method of claim 1, wherein said optical properties are measured by a diffuse reflectance technique.

Claim 4 (original): The method of claim 1, wherein measuring steps (a) and (b) are performed simultaneously.

Claim 5 (original): The method of claim 1, wherein measuring steps (a) and (b) are performed sequentially.

Claim 6 (original): The method of claim 1, wherein said temperature programs employ temperatures ranging from about 10 °C to about 45 °C.

Claim 7 (canceled)

Claim 8 (previously presented): The method of claim 1, wherein said mathematical relationship of step (c) is derived by a method comprising the steps of:

(a) providing a population comprising a sufficient number of human subjects to establish a category selector, said population comprising a first sub-population comprising a sufficient number of human subjects in said disease state and a second sub-population comprising a sufficient number of human subjects not in said disease state;

(b) for each of said number of human subjects in said population:

(1) measuring at least one optical property at a first area on a part of an arm of each of said human subjects to obtain a first set of data, said first area being subjected to a first temperature program;

(2) measuring at least one optical property at a second area on said part of said arm of each of said human subjects to obtain a second set of data, said second area on said part of said arm of each of said human subjects being subjected to a second temperature program, said second temperature program being different from the first temperature program, said second area of said part of said arm of each of said human subjects being morphologically similar to,

- adjacent to, but not substantially overlapping with said first area of said part of said arm of each of said human subjects; and
- (c) establishing a mathematical relationship between (i) said optical properties of said first set of data and said second set of data and (ii) said disease state.

Claim 9 (canceled)

Claim 10 (canceled)

Claim 11 (canceled)

Claim 12 (canceled)

Claim 13 (canceled)

Claim 14 (canceled)

Claim 15 (canceled)

Claim 16 (canceled)

Claim 17 (canceled)

Claim 18 (canceled)

Cancel claim 7.

Cancel claims 9-18 without prejudice and without admitting anticipation or obviousness.